



# Feasibility Study

## for a Local Poverty Index

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# Introduction

This study presents the case for the development of a Local Poverty /Deprivation Index for Ireland and identifies how such an index might be constructed, including the data required in order to render such an index effective and relevant from a policy-making perspective.

# Background and Rationale

- Traditional approaches to measuring poverty have primarily been constructed at a national or regional scale.
- Two of the most prominent measures used to identify poverty are the EU definitions of the 'at-risk-of-poverty' and 'consistent poverty' rates. Both of these require in-depth survey data.
- Research on poverty and deprivation has identified a gap in the coverage of broad spatial mapping exercises, namely the existence of a pattern of local clustering of poverty and disadvantage. But knowledge of local level variation is crucial for policy initiatives such as the Local Anti-Poverty Strategy (LAPS) and other social inclusion oriented local development initiatives.
- Because of the limits to the use of survey-based poverty measures below the regional scale, local poverty/deprivation measures must necessarily draw on proxies that may either be based on Census or administrative data sources. One well-used approach, at international level, to measuring poverty/deprivation at the local scale has been the construction of composite indices. Examples include the Haase & Pratschke *Index of Relative Affluence and Deprivation for Ireland* and Noble's *Multiple Deprivation Measures* for Northern Ireland and the UK.
- Mapping poverty and deprivation in this way is valuable for two reasons. Firstly, it can assist in identifying local clustering in order to inform policy initiatives and, secondly, it highlights the nature of spatial variation- a fundamental issue when considering social inequalities and social inclusion within the strategic planning process, particularly in relation to the Local Authorities.
- There is some debate over the merits of area-based approaches to combating social exclusion, as it is broadly accepted that most poor people do not live in a small number of highly disadvantaged areas. At the same time, it is equally acknowledged that certain areas experience an exceptionally high concentration of poor people and that this can bring with it additional problems that need to be addressed through appropriate services and policy responses.
- The purpose of area-based approaches is, thus, to complement initiatives aimed at individuals by adding a consideration of contextual effects. The purpose of local poverty/deprivation indices is to provide a targeting tool to achieve the greatest possible effectiveness of this approach.
- If an index is used for this purpose, it must be consistent and comparable over time and space as well as being statistically reliable and robust. In addition, it needs to have the broad support of all relevant stakeholders.
- In summary, a poverty/deprivation index at a fine local scale is a useful tool, given the needs of policy-makers and the need for a consistent methodological approach. To date, it has only been possible to derive such an index for Ireland at the level of Electoral Divisions (EDs), using data from the Census of Population.
- To be fully effective such an index should, ideally, (i) be constructed at a more detailed geographical scale and (ii) be based on a wider set of relevant data.

# Aims & Objectives of the Study

The aim of this study is to explore the possibility of creating a meaningful and replicable local poverty/deprivation index for the Republic of Ireland. To this end, the study set out to achieve five primary objectives:

- To identify best practice approaches to measuring poverty and deprivation at the local level
- To assess user needs and the potential benefits of establishing a local poverty/deprivation index
- To identify possible indicators of poverty and deprivation and associated data sources at a local level
- To examine methodologies for compiling, managing, utilising and disseminating this data
- To make recommendations for developing a local poverty/ deprivation index post 2006.

## Summary of Main Findings

- The consultation process undertaken as part of this study clearly identifies that there is wide support amongst institutional and local stakeholders for a local poverty/deprivation index.
- A local poverty/deprivation index plays an important role in the process of local poverty impact assessment and, thus, the wider objectives of the LAPSIS, NAPS and NAPInclusion.
- The current Irish and NI/UK deprivation indices both provide important elements which would need to be incorporated in an 'optimal' index for Ireland.
- The Irish *Index of Relative Affluence and Deprivation* takes its strengths from its overall dimensionality and its ability to provide comparable deprivation scores over successive Census periods.
- The NI/UK *Measures of Multiple Deprivation* take their strength from the inclusion of a broader set of data, based on administrative data sources and the successful implementation of a more detailed census geography.
- Due to the absence of both a revised census geography and any additional poverty-related indicators from administrative data sources at this point in time, the 2006 Irish deprivation index will be constructed in a similar manner to the 2002 index.
- A new census geography of Small Areas (SAs) is currently being developed and the CSO is committed to publishing the 2011 SAPS data at that level.
- Little progress has been made, to date, with regard to poverty-related data coming forward from administrative data sources. However, these sources remain a rich potential source of information to inform patterns of local poverty.

# Key Recommendations

- 1 A Key Stakeholder needs to be identified to drive the local poverty/deprivation index forward. Monitoring progress on poverty is a central element in the call for greater availability of local data. The next step is to identify a key actor for the development of a local poverty/ deprivation index.
- 2 The Key Stakeholder should prepare discussions with Government Departments to promote a willingness on their part to provide local area data relevant to anti-poverty and social inclusion proofing. The Key Stakeholder should, either on its own, or in conjunction with other relevant agencies, develop an initiative to discuss the barriers that need to be overcome to make relevant local poverty data, from administrative data sources, available at the earliest point in time.
- 3 The Key Stakeholder should prepare for the greatest possible 'buy-in' for a new poverty/deprivation index by all relevant Government Departments, agencies and local stakeholders in advance of the 2011 data becoming available. In the past, the *Index of Relative Affluence and Deprivation* has been widely used across various Government Departments, state and voluntary agencies and the community sector. However, there has never been an 'official' Irish deprivation index, used as the definitive index across all major stakeholders.

If, as is envisaged, different Government Departments will, in future, provide local area data, based on their respective administrative records, prior agreement about the use of the data and 'buy in' to the resulting deprivation index is essential.

- 4 Availability of local data, based on administrative data sources, should be secured well in advance of 2011, particularly in relation to Social Welfare, Health, Education and Environment. The INSPIRE directive requires that member states make spatial data templates from administrative data sources available by 2014 - a clear target date by which the data structures must be in place. The new Small Area geography will be developed in advance of the 2011 Census, and the CSO is committed to publishing the 2011 SAPS at the level of the new SAs. It is, thus, of utmost importance that other poverty-related information from administrative data sources is also made available by 2011 at the latest.
- 5 The 2011 Index should be constructed using both census and administratively-based data sources: Census data remains the most robust data source for local area data. As the Census is carried out every five years in Ireland, it is also quite timely. We do not recommend replacing the use of census data for the construction of an Irish deprivation index by indicators based on administrative data sources alone. Ideally, we recommend the development of an approach that maximises the potential of both types of data.
- 6 The 2011 Index should build on the most advanced methods of index construction. The current Irish and NI/UK deprivation indices have different strengths and weaknesses. A future Irish index should draw on the strengths of both indices by using a new census geography, incorporating a balanced approach to measuring urban and rural deprivation and ensuring comparability over time.

# Measuring Poverty & Deprivation

*People may be said to be experiencing deprivation if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which would be regarded as acceptable by society more generally. Thus, as a result of poverty, people may be marginalised and excluded from participating in activities which are considered the norm for other members of society.*

*This definition was first advanced as part of the National Anti-Poverty Strategy (NAPS) in 1997 and continues to be valid under the current National Action Plan for Social Inclusion 2007-2016 (NAPinclusion).*

There is no single, definitive way of measuring poverty, deprivation and social exclusion. In June 2006, the EU adopted a revised set of common indicators of social protection and social inclusion across member states. The two key indicators, which are also central to the monitoring of the Irish NAPinclusion are the 'at-risk-of-poverty' and the 'persistent at-risk-of-poverty' rates.

The 'at-risk-of-poverty' rate identifies all those households or people who fall below a certain income threshold, which in the EU has been set at 60% of median income. The official Government-approved measure used in Ireland is **consistent poverty**. This measure identifies the proportion of people who are at risk of poverty **and also** deprived of two or more goods or services considered essential for a basic standard of living.

Both indicators are regularly monitored using the *EU Survey of Income and Living Conditions (EU-SILC)*. Results are published at both national and regional level, but are also available from the CSO, on request, for Local Authority areas. However, because of constraints imposed by the sample size, it is not feasible to use these measures at lower geographical levels.

## Deprivation Indices

### Why have they been developed?

Historically, deprivation indices were first used in the health arena. By linking local health outcomes to the underlying social and economic population characteristics, it is possible to plan for more balanced spatial coverage of health services throughout a country. Deprivation indices are still used in many countries to achieve this goal.

Since the early 1990s, a new era of local development initiatives has developed as part of the multi-faceted response to the deep-rooted problems encountered in certain (predominantly urban) neighbourhoods, mainly in the US and Western Europe.

Deprivation indices quickly established themselves as the tool by which to identify urban areas of greatest need, and thus help to build both the political consensus to address the specific needs of these areas and achieve an effective use of scarce resources. In Ireland, this development was driven by the desire to identify a new response to the prevalence of very high levels of long-term unemployment in certain areas, specifically via the establishment of the pilot area partnerships under the *Programme for Economic and Social Progress (PESP)*.

## What are deprivation indices?

To establish whether a person, or a group of persons, is socially excluded requires a survey. However, surveys are expensive to carry out, and are therefore only possible at regional or national level. If we want to have comparable information for a large number of small areas, or indeed the whole country, it is necessary to utilise very large datasets, which provide identical and consistent information for each locality.

Initially, the only data source that could be used for such purpose was the national Census of Population. However, increasing computerisation over the past decades has made it possible, at least in principle, to also use administrative databases, notably those established by key government departments and state agencies.

However, neither the Census nor administrative datasets include any direct measure of poverty. It is therefore necessary to use one or more 'proxy' indicators that are known to be indicative of the extent of poverty. The objective of a deprivation index is to utilise the best available data sources and the best methods in combining these to construct a reliable predictor of poverty/deprivation for each local area.

## How have deprivation indices been constructed worldwide?

There are two aspects to this question: firstly, the choice of 'domains' of data, and, secondly, the method for combining this data to form a single index.

### Domains

There is general agreement amongst both academics and stakeholders about the domains from which data might typically be included in a deprivation index. These include:

- Income
- Employment
- Health and disability
- Education and skills
- Environment and crime
- Opportunities and access to services

The extent to which data from these domains may be included, and the choice of particular variables, is largely a question of data availability. To date, the only data source available for the construction of an Irish deprivation index has been the Census of Population, which makes it difficult to cover all of the above domains.

### Method of Construction

Whatever the data sources and number of variables available, the second important question is how to combine the information into a single index.

The key question here is that many of the indicators captured by the domain data will be expressions of the same underlying causes of deprivation. We know, for example, that a person's social class has an effect on his/her income, education, the quality of housing and health. Thus, if we were simply to rank each observation across all of the spatial units and then add the rankings together, we would be in danger of 'double counting' those effects for which we have the most indicators.

To overcome the problem of 'double counting', which is unavoidable with the simple additive approach, the most common method used is Factor Analysis. Factor Analysis is a statistical method by which multiple observations are reduced to their underlying dimensions, thereby eliminating all 'double counting'. These dimensions/factors also provide important information about structural aspects of the spatial distribution of poverty/deprivation.

## International Evidence

Some form of deprivation index exists in almost every OECD country. The OECD itself, through its Territorial Committee, has made a considerable contribution to the collection and systematic use of data to address the problems of distressed urban areas. It is, however, difficult to gain a comprehensive international overview of this field of research, as some of the existing indices are used within specific sectors only (e.g. health or the environment), or are limited to certain areas of the country.

Historically, there has been a strong impetus towards the development of deprivation indices within the Anglo-Saxon countries, with prominent indices existing in the UK, Ireland, US, Canada, Australia and New Zealand. In other European countries, deprivation indices exist, but tend not to be available for the whole country, and are not strongly endorsed across multiple sectors or by government departments.

The European Union has only recently begun to pay greater attention to local poverty/deprivation estimates. To date, the emphasis has been on developing a unified approach to the measurement of poverty at national and regional level, as exemplified in the revised set of common indicators of social protection and social inclusion (2006).

Attempts to extend such measures to the local scale are still in their infancy. They tend to focus on mathematical models which use co-variables from other data sources (e.g. the Census of Population) to estimate the *at-risk-of-poverty rate* or other key poverty indicators. The advantage of this approach is that it provides a uniform method which can, at least in theory, be extended to all EU countries to yield comparable data throughout the EU. However, it is important to note that this approach can only yield a one-dimensional estimate of the poverty rate or some other similar quantity, and cannot itself provide a multi-dimensional measure of deprivation.

Efforts have been made by the European Commission Joint Research Centre (JRC) and the OECD to tackle the methodological questions underlying the use of composite indicators, of which deprivation indices are a particular example. The recently published *Handbook on Constructing Composite Indicators (OECD, 2005)* provides important guidelines in this regard. Unfortunately, this handbook is exclusively concerned with between-country comparisons and does not address the specific problems encountered in the construction of local poverty/deprivation indices. The handbook does, however, provide important insights into the principles of good indicator construction, which, if appropriately extended, are highly relevant to the construction of a composite local deprivation index.

## Irish and NI/UK Examples

The two indices that are of greatest interest in the context of the present study are the current Irish and NI/UK indices.

In Ireland, the most commonly used deprivation index is the *Index of Relative Affluence and Deprivation* (Haase & Pratschke 2005). This index applies a factor-analytical

approach to allow for identical indices (in structure and measurement) to be constructed for successive census periods. It has thus, for the first time, provided a method by which it is possible to derive a deprivation index which can reliably be used to analyse changes in poverty/deprivation over time. The index was commissioned by Pobal, but is used across a number of Government Departments and Local Authorities, particularly in the local development arena. A new index following the same conceptual underpinnings is currently being constructed using 2006 Census data.

In the UK, the latest deprivation indices are the *Multiple Deprivation Measures* (MDM) (Noble et al., 2000-2005), with separate indices created for England, Wales, Scotland and Northern Ireland. The MDM has received much international interest, as it embodies two major advances. Firstly, it relies on small geographical units and, secondly, it is based predominantly on administrative data sources.

Methodologically, the indices first rank the areas according to their level of deprivation within each domain and then apply a simple additive approach to combine the domain level data into a single index. As each deprivation index in the UK over the past three census waves has been constructed in a different way, it is not possible to compare deprivation scores from one decade to another.

## Other Examples

Other examples of well-established deprivation indices exist in Canada, the USA and New Zealand.

The *Canadian Index of Well-being (CIW)* is a broad multidimensional index which goes beyond pure measures of affluence and deprivation. Building on the experience of previous Quality of Life (QoL) indices for Canada, the CIW considers a wide range of beneficial activities as assets, and harmful ones as deficits. The CIW is constructed in close co-operation with the European Commission Joint Research Centre (JRC) and the OECD.

A number of deprivation indices have been computed for the USA, but most of these are limited in scope, aiming to provide comparable social and health-related data for the main cities or for urban and suburban areas only.

Conceptually, the *New Zealand Index of Deprivation* is closest to the current Irish index. This index is based entirely on census data and the domains and variables covered closely resemble those used by Haase & Pratschke. The index has been constructed in almost identical fashion for the 1991, 1996, 2001 and 2006 Censuses, and also provides some, though limited, comparability over time.

# Using Deprivation Indices

## Who would be the main users?

Deprivation indices have been employed in two main areas in the Irish context: to assist in the design of policies to address social exclusion at local level and in the monitoring of balanced regional development.

For the first purpose, the chief users have been the Local Authorities, CDBs and the Community Enterprise and Social Inclusion Monitoring Groups, the Department of Rural, Community and Gaeltacht Affairs, Pobal, Area Partnerships and many different community groups on the ground. As far as the second purpose is concerned, the main users have been the Regional Authorities and central Government.

However, deprivation indices, particularly if they are based on a greater variety of data sources, can be put to a much wider use. The following are only some examples of their potential application:

- **Social Welfare:** mapping and monitoring of payments; evaluation of benefit diffusion; links to medical card holdings; monitoring policy implementation.
- **Health:** public health modelling; medical card holdings; hospital catchment profiles; accessibility and utilisation mapping; links to social and educational characteristics; implementation of primary health care strategy.
- **Education:** service need planning in new suburbs; school population forecasting; special needs mapping (overlaps with health and social care).
- **Environment & Local Authorities:** local profiling for planning purposes; places-at-risk modelling; impact assessments (SEA, EIA, HIA, PIA).
- **Agencies and NGOs:** working with statutory and voluntary sector agencies utilising same datasets; including area partnerships and other area-based initiatives.

## User Needs and Benefits

There is an ongoing debate about the need for local data on poverty and social exclusion in general and the usefulness of a local poverty/ deprivation index in particular.

The call for more social and economic data to be made available at local level is widely supported and shared by all relevant stakeholders. It is a pre-requisite for designing policies to address issues of poverty and social exclusion and for improving service delivery, as well as for better co-ordination of services at local level.

Some of the critics of deprivation indices point out that these are of little help in the design of policies to address poverty and social exclusion, as they confound the different domains in which social exclusion may be experienced. The best information for building local policies, it is argued, is provided by the specific domain in which the policy is situated.

But this is to misunderstand the main purpose of deprivation indices. Because they combine the available information into a single value, these measures can help to:

- identify the overall neediness of an area
- assist in the targeting of resources towards areas of greatest need
- assist in building a political consensus around the targeting of those areas, and
- help in the monitoring and evaluation of initiatives and policies which aim at redressing the increased incidence and depth of poverty experienced in such areas.

This rationale has contributed to the use of deprivation indices across a wide area of Government Departments in the UK and fuelled the growing demand for an 'official' local poverty/deprivation index in Ireland.

## Feedback from Consultation

To gauge the support for an 'official' poverty/deprivation index in Ireland and, where relevant, the willingness to contribute data towards such an index, the authors engaged in a wide-spread consultation with key stakeholders. This consultation process also addressed the question of what other issues should be considered when constructing a local poverty/ deprivation index for Ireland. It should be mentioned that some of these consultations were undertaken in the context of other but related studies over the past two years.

Consulted stakeholders include:

- Representatives from the Area and Community Partnerships and PLANET
- A series of workshops involving a large variety of stakeholders who are active in rural communities
- The Office for Social Inclusion
- Combat Poverty Agency
- Pobal
- Department of the Taoiseach
- Department of Social and Family Affairs
- Department of Rural, Community and Gaeltacht Affairs
- Department of the Environment, Heritage and Local Government
- Department of Education and Science

These stakeholders strongly welcomed the initiative and expressed a wish to participate in the process. Rather than reporting on individual stakeholders' concerns or wishes, we will deal with a range of issues in a thematic fashion. We will structure responses into three themes: (i) the context, (ii) the data sources and (iii) technical issues in the construction of a poverty/deprivation index (these will be addressed in the following three sections).

## The Context

We will start by briefly outlining the context, which needs to be borne in mind when discussing the feasibility and design of a deprivation index for Ireland.

## The EU Common Indicators of Social Protection and Social Inclusion

Over the past decade, there has been an increasingly harmonised approach to the measurement of poverty and social exclusion at European level. At the Laeken meeting in 2001, the European Council endorsed the first set of 18 common statistical indicators, which will allow comparison of member states' progress towards agreed EU objectives in relation to poverty and social exclusion. Over the next five years, the indicators were further refined and broadened and adopted by the Council in 2006 as the *EU Common Indicators of Social Protection and Social Inclusion*.

The EU indicators are designed primarily for use at national and regional level, and it is not practicable to produce the key indicators at local level. Nevertheless, to be politically relevant, any local poverty/deprivation index will have to take the EU indicators into account.

At the same time, the *EU Common Indicators* are not the only standard. It is widely acknowledged that key indicators such as the *at-risk-of-poverty* rate are mainly indicators of income poverty, whilst deprivation indices typically attempt to cover a wider range of domains. In order to validate a given deprivation index containing multiple domains, we require a higher-level EU poverty indicator which also covers the same domains.

## Poverty Impact Assessment

The Irish government is committed to making a decisive impact on poverty by 2010. The ways by which it aims to achieve this are set out in the National Anti-Poverty Strategy (NAPS) and the *National Action Plan for Social Inclusion (NAPinclusion)*.

NAPS and NAPinclusion both recognise the contribution that local initiatives can make towards this end and particular emphasis is given to the *Local Anti-Poverty and Social Inclusion Strategy (LAPSIS)*.

Any local poverty/deprivation index will have to take an important role both in the process of local poverty impact assessment as well as in the monitoring and evaluation of local social inclusion initiatives. However, to fulfil this role, such an index must be well understood, enjoy broad support amongst key institutional and local stakeholders and be designed to suit this purpose.

## The Irish Spatial Data Initiative (ISDI)

The ISDI is a cross-departmental working group under the auspices of The Information Society, under the Department of the Taoiseach.

The ISDI is headed jointly by the Central Statistics Office and the Ordnance Survey of Ireland and sets out to address two issues:

- Developing a proposed new Small Area data infrastructure, and
- Through discussion with government departments, developing their ability and willingness to provide aggregate data from their administrative databases at the level of these new Small Areas.

## New Small Areas

The need for a revision of the current Electoral Divisions (EDs) level geography of the Small Area Population Statistics (SAPS) arises from the uneven population of EDs. The populations covered by individual EDs in the 2006 Census of Population range from less than 50 persons in some rural areas to over 32,000 in Blanchardstown – Blakestown. As many social indicators, such as the unemployment rate or the proportion of adults with primary education are typically expressed as ratios, these can have very different meanings if the population base is spread over such an extraordinarily wide range.

The principal approach taken in developing a new census geography of Small Areas (SAs) closely mirrors similar developments throughout the UK and work is already under way at the National Centre for Geocomputation at NUI Maynooth.

### Electoral district level

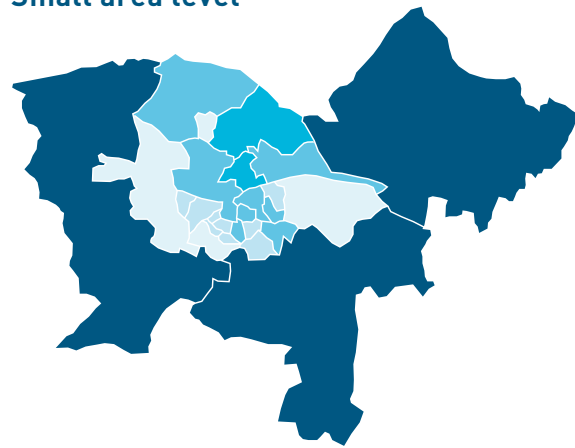


### Percentage of GMS card holders

● 14.6%

Based on anonymised data provided by the Department of Health and Children (DOHC).

### Small area level



### Percentage of GMS card holders

- < 6%
- 6-9%
- 9-18%
- 18-36%
- > 36%
- No Data

## Achieving Departmental Readiness.

The second purpose of the ISDI Working Group is to assist the main Government Departments in developing a common platform for the sharing of information at the highest level of spatial disaggregation possible.

There is a growing awareness, at least amongst some Government Departments and state agencies, of the need for improved provision and sharing of local data.

Figure 1 above shows an example from the study undertaken by the ISDI Working Group, comparing the distribution of medical card holders in Maynooth at ED and SA level, to show the increased local detail that the latter make available.

## New EU Directive: INSPIRE

INSPIRE raises at a strategic level the principal issues that need to be addressed, which were also central objectives for the ISDI Working Group. These have been given new impetus via an EU directive, which is now mandatory for all EU members and which is to be implemented by 2014 at the latest.

The questions effectively raised by the directive that, therefore, must be addressed in the immediate future, are as follows:

- data ownership
- data privacy and confidentiality
- data access
- data interpretation
- database formats
- multiple agency, and governance.

The principles of data sharing in the Irish context are well summarised in a recent policy paper by Fingal County Council:

- Data should be collected once and maintained at the level where this can be done most effectively.
- It should be possible to seamlessly combine spatial data from different sources and to share it between many users and applications.
- Spatial data should be collected at one level of government and shared between all levels.
- Spatial data needed for good governance should be available on conditions that do not restrict its extensive use.

## Data Sources

In this section, we will discuss the use of Census data and data emanating from administrative databases in the context of the construction of a local poverty /deprivation index for Ireland. Attention is given to distinguishing between the availability of local data in general, and its use in index construction in particular.

### Using Census Data

The strength of Census data is that it provides a highly reliable and robust source of data. Furthermore, the Small Area Population Statistics (SAPS) provide local area data at Electoral Division (ED) level, which themselves enjoy stable boundary definitions in Ireland across a considerable time period. There are, however, some weaknesses inherent in Census data:

#### Timeliness

The Census is carried out every 5 years in Ireland and every 10 years in Northern Ireland and the UK. It also takes at least one year from the time of the Census until the SAPS are published. Thus, concerns are frequently voiced with regard to the timeliness

of Census data and their ability to inform the policy-making process and the evaluation of social inclusion programmes.

Our view on the timeliness of Census data is somewhat less critical, at least in the context of the construction of a local poverty/deprivation index. This concern was of particular importance in the UK, given the use of a decennial Census. This fact provided a major impetus to the search for alternative and more timely data sources. However, this consideration does not apply to the same extent in the Irish situation.

Secondly, the importance of timeliness is frequently overstated, perhaps due to the wish to identify short-term advances along the path towards greater social inclusion. Unfortunately, these expectations are not only unrealistic, but also unwarranted, if they adversely influence our choice of data.

The *Index of Relative Affluence and Deprivation* has convincingly shown that, despite the ability of all areas to benefit from the economic boom of the 1990s, the relative spatial distribution of affluence and deprivation has not changed in any significant way (with the exception of Dublin's Inner City) over the period in question.

Similar studies in England and Wales indicate that the relative spatial distributions of affluence and deprivation may not have significantly changed over a hundred-year period.

This reinforces the view expressed at the onset of the local area initiatives in the early 1990s, namely that the spatial concentration of poverty in certain areas (and the social problems associated with this) are a deep-rooted structural problem which will not disappear in the short or medium term, but will require a multi-faceted response over a considerable length of time.

With regard to the construction of a local poverty/deprivation index, we thus give considerably greater importance to the reliability of data and its ability to provide comparable measures over longer periods of time, rather than its ability to capture short-term fluctuations. In other words, where Census data is available, we view this as the data of greatest value for the purposes of index construction. We also particularly welcome that the CSO has already committed itself to providing the 2011 SAPS data at the level of the newly-defined Small Areas (SAs).

## Using Administrative Data Sources

With the computerisation of data base systems, administrative data have come to provide a rich potential source of information. Each of these databases typically contains information on place of residence, which can be linked to a particular geographical point on the Irish grid (by geocoding), allowing data to be aggregated to either ED or SA level (or indeed to any other type of area).

There are, obviously, questions regarding data ownership; privacy and confidentiality; data access and interpretation; database formats; multiple agency and governance; which will be addressed in the context of the ISDI and INSPIRE initiatives. But it is without question that administrative data sources could provide considerable insights into the spatial distribution of benefit uptake; supported housing; environmental aspects; health and education status - to name just a few of the most obvious applications.

It is also clear that administrative data sources could provide invaluable information for the process of local poverty impact assessments and improvement in the delivery and design of local services. Not surprisingly, the call for such data to be made available was particularly prominent amongst all stakeholders during the consultations undertaken as part of this study.

However, the use of data from administrative data sources for the purpose of constructing a local poverty/deprivation index is less clear-cut when compared with its more general “usefulness”.

The data requirements raised by index construction are much more demanding than those for the more general use of statistical information.

To use data for the construction of a poverty/deprivation index, this data must be:

- concise
- consistent for all spatial units
- consistent in its meaning over time and
- timely (to the extent discussed above).

In addition to these general requirements, a number of additional aspects need to be satisfied. These are that:

- identical data must be available for all spatial units
- indicators need to have a near-normal distribution
- data may require transformation prior to inclusion, and
- the inclusion of specific indicators should follow theoretical reasoning, in order to provide a balanced dimensionality.

There are clearly indicators from administrative data sources which would easily qualify with regard to all of the above criteria. Examples include:

- data on health and well-being (e.g. standardised mortality rates, data on intellectual and physical disabilities, information on medical card holders, carers, drug use and depression), or
- information on early school-leaving and educational achievement, or
- information on crime rates or environmental factors.

We have doubts, however, about whether, or under what circumstances, benefit data could be included in such an index. Social welfare benefits are crucially dependent on the rules of entitlement, and these are highly prone to change over time. Thus, a situation could arise where entitlements are reduced, and estimates of poverty simultaneously decline, which is obviously counter-intuitive. Whilst such a consideration is of lesser concern if we are purely interested in a cross-sectional analysis of the geographical distribution of affluence and deprivation at a single point in time, it constitutes a major concern in the context of an index that is suitable for the longitudinal analysis of spatial deprivation. In some cases, it is possible to rescale or transform these data in order to maintain comparability, but this underlying difficulty nevertheless remains relevant.

## Possible Indicators for a future Local Poverty/Deprivation Index

Table 1 on page 17 shows a number of possible indicators, as they have either been suggested throughout the consultation process, or as they have been used in existing deprivation indices.

The column for the 2006 Index shows the limited number of indicators which are currently available for the construction of the 2006 Irish deprivation index at the level

of Electoral Divisions (EDs). They are also all based on the SAPS data from the 2006 Census of Population.

The column for the 2011 index shows a range of indicators that might be considered for an index at the greater geographical detail of the proposed Small Areas (SAs), if additional data from administrative data sources were to become available. Where an indicator is marked 'n/a', it exists at higher levels of spatial aggregation (i.e. nationally or regionally), but is deemed difficult to replicate at local level, either because indicators are survey-based, or because a feasible data provider cannot be identified at this point in time.

**Table 1: Possible Indicators for Local Poverty/Deprivation Index**

Domain Indicator	available for 2006 Index	Possible Indicators for 2011
<b>Income</b>		
At-risk-of-Poverty rate		n/a
Consistent Poverty		n/a
other derivatives of above		n/a
SW dependency (benefit-based)		✓
Financial difficulties (subjective)		n/a
<b>Employment</b>		
Unemployment (Census-based)	✓	✓
Unemployment (ILO-based)		n/a
Long-term unemployed		n/a
Part-time employment		n/a
All of above (benefit-based)		✓
Low pay		n/a
Access to training		n/a
Small farming	{✓}	✓
<b>Health</b>		
Premature mortality		✓
Medical Card holder		✓
Limiting Long-Term Illness or disability		✓
Disability (Census-based)		✓

Domain Indicator	available for 2006 Index	Possible Indicators for 2011
Low birth weight		✓
Depression		✓
Drug use		✓
<b>Education</b>		
Primary education only	✓	✓
Third level education	✓	✓
Early school leaving		✓
Without basic literacy / numeracy		✓
<b>Living Environment</b>		
Homelessness		n/a
Temporary accommodation		n/a
Overcrowding	{✓}	✓
LA housing	✓	✓
Lacking amenities		n/a
Poor environment		n/a
Crime and Disorder		n/a
Children in unsuitable accommodation		n/a
<b>Demography and Social Class</b>		
Age dependency	✓	✓
Population change	✓	✓
Social class	✓	✓
Single parent	✓	✓
Pensioners living alone	{✓}	✓
Ethnic minorities	{✓}	✓
<b>Opportunity Deprivation</b>		
Lack of access to essential services		n/a
Access to public transport		✓

# Conceptual and Technical Issues

There are a number of important conceptual and technical issues to be tackled when constructing a poverty/deprivation index. These relate to questions of the appropriate definition of deprivation, the appropriate unit of analysis and, as already discussed, the domains and indicators to be included. These are all discussed in considerable detail in the main report. However, there is one particular aspect which we believe to be of particular importance - i.e. the distinction between *domains* and *dimensions* of poverty/deprivation.

The term *domains* refers to the different themes which we can use to group together the individual indicators of poverty/deprivation, such as income, health, employment, and so on.

The term *dimensions*, when used in the context of index construction, assumes a very precise meaning in terms of the underlying, but unobserved factors that contribute to an overall measure of poverty/ deprivation. Unfortunately, these two terms are frequently used interchangeably, even though they refer to very distinct and different concepts in the context of index construction.

In our view, the UK and NI *Measures of Multiple Deprivation* fail to sufficiently distinguish between these two concepts. Whilst a dimensional analysis is undertaken within each of the constituent domains, no such analysis is undertaken across the domains. As a consequence, the MDM exhibits major shortcomings with regard to the adequate measurement of rural deprivation and displays a strong urban bias. The concern about the appropriate conceptualisation and measurement of rural deprivation featured strongly throughout our consultations and would also be of major importance when constructing an index that could provide a prototype for comparative research at the European level.

This study presents the case for the development of a Local Poverty/ Deprivation Index for Ireland and identifies how such an index might be constructed, including the data required in order to render such an index effective and relevant from a policy-making perspective.



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